



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,217	11/14/2001	Mike Godfrey	6568-2A	6727

7590

06/24/2004

Ian Fincham  
McFadden, Fincham  
Suite 606  
225 Metcalfe Street  
Ottawa, ON K2P 1P9  
CANADA

EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/987,217

Applicant(s)

GODFREY ET AL.

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 1/18/02 has been considered by the examiner.

***Drawings***

2. The drawings are objected to because the figures are not numbered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "60" and "70" have both been used to designate the semiconductor chip. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 65. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 80, and 42

Art Unit: 2644

(described in relation to the prior art). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Specification***

6. The disclosure is objected to because of the following: the applicant describes in his disclosure an invention of prior art, U. S. Patent 577083, having several specific components. However, upon the examiner reading the specification of U. S. Patent No. 5778083, some of the details expressed by the applicant are not found in U. S. Patent 5778083.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 4-5, 16 and 17** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "said top and bottom microphones" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "said chip" in line 4. There is insufficient antecedent basis for this limitation in the claim.

In consideration of the entirety of claim 5, the "sound processing means" be examined as substitution of the "said chip".

Claim 16 recites the limitation "said interface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said interface" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

For examination purposes, the claims' limitations relating to the direction in which the microphone system is viewed in the plane is interpreted in relation to the position of the speakers and listener.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1, 4-5, 10-12, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey, U. S. Patent No. 5778083.

Regarding **claim 1**, Godfrey discloses a global sound microphone system comprising a frame with an oval outer perimeter with a plurality linear pick-up microphones mounted on the frame, the microphones each have an outward faced diaphragm which enables the microphones to form an elliptical pattern (col. 3, lines 51-64 and col. 5, lines 49-51 – col. 6, lines 4-11, and 35-36 and figure 1), which reads on the microphone system;

the multi-channel digital recording device coupled to the digital mixer and outputs to speakers (col. 4, lines 46-54) reads the sound processing means and a pair speakers;

the microphones are connected the multi-channel digital mixer which is connected to a multi-channel digital recording device (col. 4, lines 46-49), which reads on the means connecting the outputs of the microphone to the individually to the inputs of the sound processing means (col. 6, lines 12-14);

the speakers have a means for communicating with an individual channel of the recording device (col. 6, lines 20-23), which indicates a means connecting the outputs of the sound processing means to the speakers. However, Godfrey fails to specifically disclose the microphone system being viewed in a direction perpendicular to the plane.

Generally, the directional view of a listener in respect to sound depends upon the direction the sound is coming from speakers/loudspeakers. Thus, regarding the microphone system being viewed in a direction perpendicular to the plane, Godfrey indicates multi-channel surround sound systems is use have different speaker placement configuration within the listening environment (col. 5, lines 25-27). Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing a different speaker placement configuration of the speakers to enable a perpendicular directional view of the microphone system for the purpose of providing a different listening and visual enhancement of the sound system to a listener as desired.

Regarding **claim 4**, Godfrey discloses everything claimed as applied above (see claim 1). Godfrey further discloses in figures 1 and 2 five microphones, center microphone 28, left microphone 24, right microphone 16, left side microphone 26 or 22, and right side microphone

Art Unit: 2644

14 or 18, wherein center microphone 28 reads on the top microphone, and microphone 30 reads on the bottom microphone.

Regarding **claim 5**, Godfrey discloses everything claimed as applied above (see claim 4). Godfrey indicates that the microphone inputs are coupled to digital recording device via a mixer, wherein each microphone has an input to the recording device, and thus Godfrey further indicates that the sound outputs from center microphone may be mixed with other channels of the microphone outputs (col. 4, lines 56-59), which indicates that a top microphone connected to all of the inputs of the sound processing means.

11. Regarding **claim 10**, Godfrey discloses a global sound microphone system comprising a frame with an oval outer perimeter with a plurality linear pick-up microphones mounted on the frame, the microphones each have an outward faced diaphragm which enables the microphones to form an elliptical pattern (col. 3, lines 51-64 and col. 5, lines 49-51 – col. 6, lines 4-11, and 35-36 and figure 1), which reads on connecting outputs from a plurality of microphones, and mounted on an oval portable frame; the microphone outputs are coupled to the multi-channel digital recording device coupled to the digital mixer and outputs to speakers (col. 4, lines 46-54, col. 6, lines 20-23) reads inputs of a sound processing means, and connecting outputs of the sound processing means to a pair of speakers; center microphone 28 reads on a microphone above, and microphone 30 reads on microphone below (figure 2). However, Godfrey fails to specifically disclose the microphone system being viewed in a direction perpendicular to the plane.

Generally, the directional view of a listener in respect to sound depends upon the direction the sound is coming from speakers/loudspeakers. Thus, regarding the microphone system being viewed in a direction perpendicular to the plane, Godfrey indicates multi-channel surround sound systems is use have different speaker placement configuration within the listening environment (col. 5, lines 25-27). Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing a different speaker placement configuration of the speakers to enable a perpendicular directional view of the microphone system for the purpose of providing a different listening and visual enhancement of the sound system to a listener as desired.

Regarding **claim 12**, Godfrey discloses everything claimed as applied above (see claim 10). Godfrey obviously discloses the outputs of the microphone connected to the sound processing means through an interface as evident by means coupling the microphones to the multi-channel digital mixer which is connected to a multi-channel digital recording device (col. 3, lines 7-12, and col. 4, lines 46-49).

12. Regarding **claim 11**, Godfrey discloses a global sound microphone system comprising a frame with an oval outer perimeter with a plurality linear pick-up microphones mounted on the frame, the microphones each have an outward faced diaphragm which enables the microphones to form an elliptical pattern (col. 3, lines 51-64 and col. 5, lines 49-51 – col. 6, lines 4-11, and 35-36 and figure 1), which reads on connecting outputs from a plurality of microphones, and mounted on an oval portable frame; the plurality of microphones (figures 1 and 2) center microphone 28, left microphone 24, right microphone 16, left side microphone 26 or 22, and



right side microphone 14 or 18; wherein center microphone 28 (mounted on top of the frame) constitutes as a top microphone as well, and microphone 30 (mounted below the frame) reads on the bottom microphone; and the microphone outputs are coupled to the multi-channel digital recording device (col. 4, lines 46-54, col. 6, lines 20-23) reads inputs of a sound processing means. Godfrey further indicates that the sound outputs from center microphone may be mixed with other channels of the microphone outputs (col. 4, lines 56-59), which indicates that a top microphone connected to all of the inputs of the sound processing means.

However, Godfrey fails to specifically disclose the microphone system being viewed in a direction perpendicular to the plane.

Generally, the directional view of a listener in respect to sound depends upon the direction the sound is coming from speakers/loudspeakers. Thus, regarding the microphone system being viewed in a direction perpendicular to the plane, Godfrey indicates multi-channel surround sound systems is use have different speaker placement configuration within the listening environment (col. 5, lines 25-27). Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing a different speaker placement configuration of the speakers to enable a perpendicular directional view of the microphone system for the purpose of providing a different listening and visual enhancement of the sound system to a listener as desired.

12. **Claims 2-3, 13-14, 16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey in view of Julstrom, U. S. Patent No. 5673327.

Regarding **claims 2, 14 and 17**, respectively, Godfrey discloses everything claimed as applied above (see claim 1, 12 and 11, respectively). Godfrey obviously discloses the outputs of the microphone connected to the sound processing means through an interface as evident by means coupling the microphones to the multi-channel digital mixer which is connected to a multi-channel digital recording device (col. 3, lines 7-12, and col. 4, lines 46-49). However, Godfrey fails to specifically disclose the interface comprising an amplifier.

Regarding the amplifier, Julstrom discloses an microphone mixer for controlling a microphone system. Julstrom's mixer comprises an preamplifier/interface block (25/27, col. 4, lines 25-31), which reads on an amplifier.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing an amplifier with an interface for the purpose of amplifying/buffering the microphone signals and/or providing level adjustments to microphone signals prior to further processing within the system.

Regarding **claim 3**, Godfrey discloses everything claimed as applied above (see claim 1). Godfrey obviously discloses the outputs of the microphone connected to the sound processing means through an interface as evident by means coupling the microphones to the multi-channel digital mixer, which is connected to a multi-channel digital recording device (col. 3, lines 7-12, and col. 4, lines 46-49). However, Godfrey fails to specifically disclose the interface comprising voltage control means.

Regarding the amplifier, Julstrom discloses a microphone mixer for controlling a microphone system. Julstrom's mixer comprises a preamplifier/interface blocks (25/27, col. 4, lines 25-31), which reads on voltage control means.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing an voltage control means (preamplifier/interface blocks) for the purpose of the providing power voltage to the microphone signals if needed.

Regarding **claim 13 and 16**, respectively, Godfrey discloses everything claimed as applied above (see claim 12, and 11, respectively). Godfrey obviously discloses the outputs of the microphone connected to the sound processing means through an interface as evident by means coupling the microphones to the multi-channel digital mixer, which is connected to a multi-channel digital recording device (col. 3, lines 7-12, and col. 4, lines 46-49). However, Godfrey fails to specifically disclose the interface comprising voltage control means.

Regarding the amplifier, Julstrom discloses a microphone mixer for controlling a microphone system. Julstrom's mixer comprises a preamplifier/interface blocks (25/27, col. 4, lines 25-31), which reads on including variable controlling inputs at the interface.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing variable control means (preamplifier/interface blocks) for the purpose of controlling various parameters/characteristics of the microphone signals as of those taught by Julstrom.

Regarding **claim 15**, Godfrey discloses everything claimed as applied above (see claim 11). Godfrey obviously discloses the outputs of the microphone connected to the sound processing means through an interface as evident by means coupling the microphones to the multi-channel digital mixer, which is connected to a multi-channel digital recording device (col. 3, lines 7-12, and col. 4, lines 46-49).

13. **Claims 6, and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey in view of the applicant's admitted prior art (AAPA).

Regarding **claim 6**, Godfrey discloses everything claimed as applied above (see claim 1). Godfrey fails to specifically disclose the sound processing means as a virtual surround semiconductor chip.

Regarding the virtual surround semiconductor chip, AAPA discloses that virtual surround chips are known in the art (Background of the Invention).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing a virtual surround semiconductor chip as the sound processing means for the purpose of enabling virtual surround functions of the input signals via smaller components, reduction in production cost and efficient audio signal processing.

Regarding **claim 7**, Godfrey discloses everything claimed as applied above (see claim 1). Godfrey fails to specifically disclose the sound processing means as DSP semiconductor.

Regarding the DSP semiconductor chip, AAPA discloses that various virtual surround chips and processors are known in the art (Background of the Invention).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Godfrey by implementing a DSP semiconductor chip as the sound processing means for the purpose of enabling virtual surround functions of the input

signals via smaller components, reduction in production cost and efficient digital audio signal processing quality.

14. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Godfrey in view of Gajewski et al, U. S. Patent No. 5630175.

Regarding **claims 8 and 9**, Godfrey discloses everything claimed as applied above (see claim 1). Godfrey discloses the input of the microphone signals to a mixer connected to a multichannel digital audio device, in which obviously supports a data processing mean of creating surround sound. However, Godfrey fails to specifically disclose the creating the surround sound mathematically or algorithms.

Regarding creating the surround sound mathematically, in a similar field of endeavor, Gajewski et al. (herein, Gajewski) discloses a surround sound system, which teaches surround sound algorithms (col. 1, lines 39-41), which indicates mathematically created surround sound and the use of real time algorithms.

It would have been obvious to one of the ordinary skill in the art the time the invention was made to modify the invention of Godfrey by implementing a data processing means using surround sound algorithms (mathematical techniques) for the purpose of extracting and providing acoustic adjustments to specific channels to create new channels with enhance and optimized sound quality.

### ***Double Patenting***

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

Art Unit: 2644

Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**16. Claims 1, 10, and 11** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10, 11, 12, 13, 16 and 19 of U.S. Patent No. RE38350 in view of Godfrey, U. S. Patent No. 5778083.

Regarding **claim 1**, a frame configuration comprising a plurality of microphones with the microphones having a diaphragm oriented outwardly of claim 10 of RE38350 reads on the microphone system and each microphone having a diaphragm facing outwards;

the microphones having a linear pick-up pattern in claim 14 of RE38530 reads on a plurality of linear pick-up pattern; and

the plurality of microphones lying in a plane and the diaphragms of the microphones lying in a non-circular generally elliptical figure when viewed in direction perpendicular to the plane of claim 13 of RE38530, reads on the diaphragm positioned on a non-circular generally elliptical figure when viewed in direction perpendicular to the plane;

the multi-channel mixer and means for electrically connecting each microphone to the mixer in claim 16 and 19 of RE38530 reads on the mean connecting outputs from the microphones;

the multi-channel sound recording device of claim 19 of RE38530 reads on the sound processing means. However, RE38530 fails to specifically disclose a pair of speakers.

Regarding the speakers, Godfrey discloses speakers coupled to a multichannel recording device (col. 4, lines 46-54).

It would have been obvious to one of the ordinary skill in the art the time the invention was made to modify the invention of RE38530 by connecting a pair of speakers for the purpose of producing the sounds of the multichannel recording device.

However, RE38530 fails to disclose the framed configured as an oval portable frame .

Regarding the oval frame, in a similar field of endeavor, Godfrey discloses a global sound microphone system. Godfrey's disclosure indicates that the frame shape may be of any configuration apparent to one skilled in the art (col. 3, lines 58-64).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of RE38530 by implement an oval frame for the purpose of providing a suitable general elliptical placement of microphones.

Regarding **claim 10**, the multi-channel mixer and means for electrically connecting each microphone to the mixer in claims 16 and 19 of RE38530 reads on the mean connecting outputs from the microphones to a sound processing means;

a frame configuration comprising a plurality of microphones with the microphones having a diaphragm oriented outwardly of claim 10 of RE38350 reads on the microphone system and each microphone having a diaphragm facing outwards;

the microphones having a linear pick-up pattern in claim 14 of RE38530 reads on a plurality of linear pick-up pattern; and

the plurality of microphones lying in a plane and the diaphragms of the microphones lying in a non-circular generally elliptical figure when viewed in direction perpendicular to the plane of claim 13 of RE38530, reads on the diaphragm positioned on a non-circular generally elliptical figure when viewed in direction perpendicular to the plane;

the microphone mounted on top of the frame in claim 11 of RE38530 reads on the one microphone above the frame, and the microphone mounted on the bottom of the frame in claim 12 of RE38530 reads on the one microphone below the frame;

the multi-channel sound recording device of claim 19 of RE38530 reads on the sound processing means. However, RE38530 fails to specifically disclose a pair of speakers.

Regarding the speakers, Godfrey discloses speakers coupled to a multichannel recording device (col. 4, lines 46-54).

It would have been obvious to one of the ordinary skill in the art the time the invention was made to modify the invention of RE38530 by connecting a pair of speakers for the purpose of producing the sounds of the multichannel recording device.

However, RE38530 fails to disclose the framed configured as an oval portable frame.

Regarding the oval frame, in a similar field of endeavor, Godfrey discloses a global sound microphone system. Godfrey's disclosure indicates that the frame shape may be of any configuration apparent to one skilled in the art (col. 3, lines 58-64).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of RE38530 by implement an oval fame for the purpose of providing a suitable general elliptical placement of microphones.



Regarding **claim 11**, the multi-channel mixer and means for electrically connecting each microphone to the mixer in claims 16 and 19 of RE38530 reads on the mean connecting outputs from the microphones to a sound processing means at a plurality of inputs of the sound processing means;

microphones mounted on a frame of claim 10 of RE38350 reads on the microphone mounted on a frame

the plurality of microphones lying in a plane and the diaphragms of the microphones lying in a non-circular generally elliptical figure when viewed in direction perpendicular to the plane, and the diaphragms facing outwards of claim 10 and 13 of RE38530, reads on the diaphragm positioned on a non-circular generally elliptical figure when viewed in direction perpendicular to the plane;

the microphone mounted on top of the frame in claim 11 of RE38530 reads on the one microphone above the frame, and the microphone mounted on the bottom of the frame in claim 12 of RE38530 reads on the one microphone below the frame. However, RE38530 fail to disclose a plurality of microphone inputs including a left, right, left side, and right side microphones; and a top microphone connect to provide output to all of the inputs of the sound processing means.

Regarding the plurality of microphones, in a similar field of endeavor, Godfrey discloses a global sound microphone system. Godfrey's disclosure comprises a plurality of microphones mounted to a frame including (figures 1 and 2) center microphone 28, left microphone 24, right microphone 16, left side microphone 26 or 22, and right side microphone 14 or 18; wherein center microphone 28 (mounted on top of the frame) constitutes as a top microphone.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of RE38530 by implementing a plurality of microphones for the purpose of providing multichannel sound input to enable a multichannel surround sound system.

Regarding the top microphone connect to provide output to all of the inputs of the sound processing means. Godfrey disclose the center microphone 28, may be mixed with other channels of the microphone outputs (col. 4, lines 56-59), which indicates that a top microphone connected to al of the inputs of the sound processing means.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of RE38530 by providing a top microphone connected to all inputs of the sound processing means for the purpose of providing a mixed sound signal among the other microphones channels to enhance the multichannel sound quality.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Art Unit: 2644

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG  
June 21, 2004

